



Investigative Workshop

Optimal Control and Optimization for Individual-based and Agent-based models.

December 1-3, 2009

Tuesday

8:15-8:40 Breakfast at NIMBioS

8:45 Introduction to NIMBioS by Lou Gross

9:00-9:40 Introduction of Participants

9:40-10:55 Talk: **“Individual-based modeling: What is it, and what's optimal (and suboptimal) about it?”** by *Steve Railsback*

Break

11:15-12:30 Talk: **“The role of individual-based models in controlling infectious disease outbreaks.”** by *Stephen Eubank*

Lunch at NIMBioS

1:30-2:30 Talk: **“Features of Optimal Control”** by *Suzanne Lenhart*

2:40-3:40 Talk: **“Optimal Management of Renewable Resources”** by *Suresh Sethi*

Break

4:00-4:30 Talk: **“IBMs for infectious diseases spreading in cities. Optimization aspects”** by *V.D. Perminov*

4:40-6:00 Reception at NIMBioS

6:30 Dinner

Wednesday

8:15-8:40 Breakfast at NIMBioS

8:45-9:45 Talk: **“Polynomial Dynamical Systems: A framework for Agent-based modeling, simulation, and control.”** by *Abdul Salam Jarrah*

9:55-10:25 Talk: **“Adapting Optimal Control from a Simple Aggregated Model to an Individual-based Model.”** by *Paula Federico*

Break

10:45-12:00 Discussion Groups

Lunch at NIMBioS

1:00-2:00 Sharing results from groups

2:10-3:10 Talk: **“On Agent-based and Differential Equation Models.”**
by Charles Macal

Break

3:30-4:30 Talk: **“Agent-Based Modeling in Computer Graphics and Games.”**
by Brian Mac Namee

4:40-5:40 Talk: **“Modeling, Analysis, and Control of Distributed Systems.”**
by Abdelhaq El Jai given through computer-connection

6:30: Dinner

Thursday

8:15-8:40 Breakfast at NIMBioS

8:45-9:45 Talk: **“Control of agent models through reduced order approximations.”**
by Ben Fitzpatrick

9:55-10:55 Talk: by **Michael North**

Break

11:15-12:15 Discussion groups

Lunch at NIMBioS

1:15-3:00 Discuss future directions with all participants

11/30/2009 10:00:00 AM